

REMARKS***Preliminary Amendment filed August 10, 2005***

On August 10, 2005 Applicant filed a preliminary amendment in which amendments to the claims were presented. The September 23, 2005 Office Action does not take into consideration the amendments presented on August 10, 2005 by the Applicant. Applicant's attorney, Paige Kitzinger, discussed this issue with Examiner Howell on October 19, 2005 at which time Applicant agreed to re-present the desired claim amendments in its next filing. Therefore, Applicant withdraws the prior amendment filed on August 10, 2005 in view of the Amendments made herein.

Amendments to the Drawings

Applicant has amended Figures 1 and 5 of the drawings to correct an error made by the draftsman and to provide consistency between the drawings. Figures 3A, 3B and 3C show the adaptor 24 in detail. As clearly shown in Figures 3B and 3C no thread is provided on the nose 94 of the adaptor. Figures 1 and 5 have been amended to eliminate the thread from the nose 94 of the adaptor 24 and thus to provide consistency between Figures 1, 5, 3B and 3C.

In accordance with 37 C.F.R. 1.121(d), a replacement sheet of drawings is attached to this amendment and is labeled "Replacement Sheet".

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Claim Rejections

Claims 1-6, 11, 12, 14, 16-18, and 20 were rejected by the Examiner under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,623,220 to Nuss. Applicant has amended claim 1 to include the limitation that the assembly includes an O-ring positioned between the shank and the adaptor. This limitation was previously presented in claim 15. Original claim 15 was rejected under 35 U.S.C. 103(a) as being unpatentable over Nuss in view of United States Patent No. 4,171,821 to Miller. Therefore, Applicant addresses the rejection of claim 1 over Nuss in view of Miller

Nuss discloses a mandrel assembly 10 which is adapted to attach a hole saw 12 and a pilot drill bit 14 to an electric drill. As noted by the Examiner, Nuss does not disclose use of an O-ring.

Miller discloses a quick change tool holder including a collet assembly 12 which provides an inner sleeve 16. As described at column 4, lines 20-63 of Miller:

The tool holder 13 has a threaded section 40 thereon which threadingly receives a nut 41. . .

The nut is dimensioned to be received within the inner sleeve 16 with a very slight clearance relationship. . . .

It will be noted that the inner sleeve 16 has a circumferential axially extending inner diameter surface 60 which extends from the area of the ball apertures 20 to the open end 21. This surface cooperates with a seal 61 carried by the nut between the groove 52 and the nut axial end 44 to seal the open end 50 of the collet assembly. In the embodiment illustrated, the seal 61 is an O-ring seal received in a second groove 62 of the nut 41 intermediate the groove 52 and the axial end 44. The seal 62 effectively prevents entry of coolant fluid, dirt, abrasives and other foreign matter into

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the collet which could otherwise foul the balls 22 so that they will not move radially outwardly when the outer sleeve is moved to release them. Should that occur, it would be impossible to disengage the tool holder 13 from the collet and the entire collet assembly and tool holder would have to be removed from the spindle and be subjected to a joined together cleaning operation or to disassembly in order to free the balls. An advantage of this invention is that the seal 62 is on the nut and can therefore be checked for wear and quickly replaced. Moreover the seal is in use only when the particular tool holder is in use.

Nuss does not mention problems with debris entering the assembly. Therefore, no motivation is provided by Nuss to modify the teaching of Nuss to include an O-ring to provide a seal which prevents debris from entering the assembly. Because neither Nuss nor Miller disclose or suggest the inclusion of an O-ring to the assembly of Nuss, Applicant's invention is not rendered obvious by the combination of Nuss and Miller.

Furthermore, the seal 62 disclosed in Miller is positioned within a recess on the nut 41 and is therefore maintained on the nut 41 as the nut is engaged and disengaged with the tool. In contrast, as defined in amended claim 1, Applicant's invention provides that the O-ring is positioned in a recess of the shank. As a result, when the adaptor is engaged or disengaged with the shank, the O-ring remains on the shank. Thus, assembly of the O-ring with each adaptor is not required. In addition, only a single O-ring is required for use with multiple adaptors.

Because amended claim 1 is not anticipated nor rendered obvious in view of Nuss and Miller, Applicant respectfully requests consideration and allowance of amended claim 1.

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Claims 2-8, and 11-14, depend from claim 1. Applicant asserts that because amended claim 1 is allowable, claims 2-8 and 11-14 are also allowable. Applicant respectfully requests consideration and allowance of claims 2-8 and 11-14.

The arbor assembly defined in amended claim 16 includes an adaptor "having apertures therein for receiving fasteners through a backplate of the hole saw". None of the references cited disclose an adaptor which includes apertures for receiving fasteners through a backplate of a hole saw. Because claim 16 as amended is not anticipated nor rendered obvious by the references cited, Applicant respectfully requests reconsideration and allowance of claim 16.

Claims 17, 18, and 20 depend from claim 16. Applicant asserts that because claim 16 is allowable, claims 17, 18, and 20 are also allowable.

Newly Added Claims

Claims 21-24 depend from claim 1. Applicant asserts that because claim 1 is allowable, claims 21-24 are also allowable.

Claims 25-26 depend from claim 16. Applicant asserts that because claim 16 is allowable, claims 25-26 are also allowable.

The adaptor defined in independent claim 27 includes "a shaft . . .; a flange extending outwardly from said shaft . . .; and at least two apertures through said flange capable of receiving hole saw mounting screws." None of the references cited disclose or suggest an adaptor for use in connection with a quick change assembly including an outwardly extending flange having

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apertures therethrough for receiving hole saw mounting screws. Because claim 27 is neither anticipated nor rendered obvious by the art cited, Applicant respectfully requests consideration and allowance of claim 27.

Claims 28-31 depend from claim 27. Because claim 27 is allowable, Applicant asserts that claims 28-31 are also allowable. Applicant respectfully requests consideration and allowance of claims 28-31.

Allowable Claims

Claims 9, 10 and 19 were found to be allowable by the Examiner. Claims 9, 10 and 19 have been rewritten in independent form to include all the limitations of the base claim and any intervening claims from which they formerly depended as suggested by the Examiner.

Applicant, therefore, requests that claims 9, 10 and 19 be allowed.

Should the Examiner have any questions regarding this Amendment, the Examiner is invited to contact one of the undersigned attorneys at (312) 704-1890.

Respectfully submitted,

Date:

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